

CSA 0976 programming in java

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## Assignment 4

### 1.Code:

```
import java.io.*;
class FileStats
{
    public static void main(String[] args)
    {
        String fileName = "File1.txt";
        int wordCount = 0;
        int charCount = 0;
        int lineCount = 0;
        try (BufferedReader br = new BufferedReader(new
        FileReader(fileName)))
        {
            String line;
            while ((line = br.readLine()) != null)
            {
                lineCount++;
                String[] words = line.split("\\s+");
                wordCount += words.length;
                charCount += line.length();
            }
        }
        catch (IOException e)
```

```

    {
        e.printStackTrace();
    }
    System.out.println("Word count: " + wordCount);
    System.out.println("Character count: " + charCount);
    System.out.println("Line count: " + lineCount);
}
}

```

## Output:

```

FileState - Notepad
File Edit Format View Help
import java.io.*;
class FileState
{
    public static void main
    {
        String fileName = "File1.txt";
        int wordCount = 0;
        int charCount = 0;
        int lineCount = 0;
        try {BufferedReader br = new
        {
            String line;
            while ((line = br.readLine()) != null)
            {
                lineCount++;
                String[] words = line.split(" ");
                wordCount += words.length;
                charCount += line.length();
            }
        } catch (IOException e)
        {
            e.printStackTrace();
        }
        System.out.println("Word count: " + wordCount);
        System.out.println("Character count: " + charCount);
        System.out.println("Line count: " + lineCount);
    }
}

```

```

Microsoft Windows [Version 10.0.19042.631]
(c) 2020 Microsoft Corporation. All rights reserved.
C:\Users\welcome>cd desktop
C:\Users\welcome\Desktop>java FileState.java
C:\Users\welcome\Desktop>java FileState
java.io.FileNotFoundException: File1.txt (The system cannot find the file specified)
    at java.io.FileInputStream.open0(Native Method)
    at java.io.FileInputStream.open(Unknown Source)
    at java.io.FileInputStream.<init>(Unknown Source)
    at java.io.FileInputStream.<init>(Unknown Source)
    at java.io.FileReader.<init>(Unknown Source)
    at FileState.main(FileState.java:10)
Word count: 0
Character count: 0
Line count: 0
C:\Users\welcome\Desktop>java FileState
C:\Users\welcome\Desktop>java FileState
Word count: 25
Character count: 128
Line count: 3
C:\Users\welcome\Desktop>

```

## 2.Code:

```

import java.io.*;
class Customer
{
    private int accountNo;
    private String accName;
}

```

```

private int balance;

public Customer(int accountNo, String accName, int balance)
{
    this.accountNo = accountNo;
    this.accName = accName;
    this.balance = balance;
}

public synchronized void deposit(int amount)
{
    balance += amount;

    System.out.println("Amount " + amount + " deposited. New balance
is " + balance);
    notify();
}

public synchronized void withdraw(int amount)
{
    if (balance < amount)
    {
        System.out.println("Insufficient balance. Waiting for deposit...");
        try
        {
            wait();
        }

        catch (InterruptedException e)
        {
            e.printStackTrace();
        }
    }
}

```

```

        balance -= amount;

        System.out.println("Amount " + amount + " withdrawn. New
balance is " + balance);
    }
}

class Main
{
    public static void main(String[] args)
    {
        int i=12345;
        String s="Saran";
        int amount=1000;

        Customer customer = new Customer(i,s,amount);
        System.out.println("Account holder name :"+s);
        System.out.println("Account balance :"+amount);

        Thread withdrawThread = new Thread(() ->
{customer.withdraw(1100);});

        Thread depositThread = new Thread(() ->
{customer.deposit(200);});

        withdrawThread.start();
        depositThread.start();
    }
}

```

Output:

```

public synchronized void deposit(int amount)
{
    balance += amount;
    System.out.println("Amount deposited: " + amount);
    notify();
}

public synchronized void withdraw(int amount)
{
    if (balance < amount)
    {
        System.out.println("Insufficient balance");
        try
        {
            wait();
        }
        catch (InterruptedException e)
        {
            e.printStackTrace();
        }
    }
    balance -= amount;
    System.out.println("Amount withdrawn: " + amount);
}

class Main
{
    public static void main
    {
        int i=12345;
        String s="babu";
        Customer customer = new Customer(i,s,amount);
        System.out.println("Account holder name :"+s);
        System.out.println("Account balance :"+amount());
        Thread withdrawThread = new Thread(() -> {customer.withdraw(1000);});
        Thread depositThread = new Thread(() -> {customer.deposit(200);});
        withdrawThread.start();
        depositThread.start();
    }
}

```

Command Prompt Output:

```

C:\Users\welcome>cd C:\Users\welcome\desktop
C:\Users\welcome\desktop>javac amount.java
C:\Users\welcome\desktop>java Main
Account holder name :babu
Account balance :2000
Amount 1100 withdrawn. New balance is 900
Amount 200 deposited. New balance is 1100
C:\Users\welcome\desktop>

```

### 3.Code:

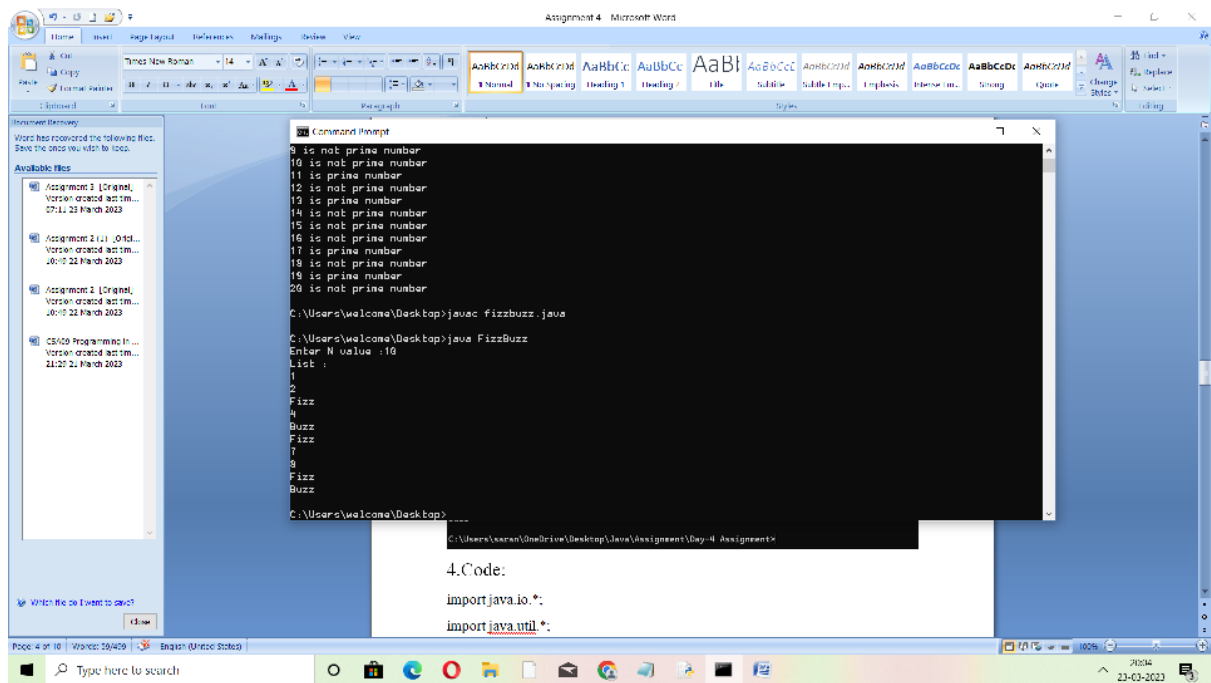
```

import java.io.*;
import java.util.*;
class FizzBuzz
{
    public static void main(String arg[])
    {
        int i;
        String a[]=new String[1000];
        Scanner s=new Scanner(System.in);
        System.out.print("Enter N value :");
        i=s.nextInt();
        for(int j=1;j<=i;j++)
        {
            if(j%3==0 && j%5==0)
            {

```

```
        a[j-1]="FizzBuzz";
    }
    else if(j%3==0)
    {
        a[j]="Fizz";
    }
    else if(j%5==0)
    {
        a[j]="Buzz";
    }
    else
    {
        a[j]=Integer.toString(j);
    }
}
System.out.println("List :");
for(int j=1;j<=i;j++)
{
    System.out.println(a[j]);
}
}
```

Output:



## 4.Code:

```
import java.io.*;
```

```
import java.util.*;
```

```
class StringShifts
```

```
{
```

```
    public static boolean canBecomeGoal(String s, String goal)
```

```
    {
```

```
        if (s.length() != goal.length())
```

```
        {
```

```
            return false;
```

```
        }
```

```
        for (int i = 0; i < s.length(); i++)
```

```
        {
```

```
            if (s.equals(goal))
```

```
            {
```

```
                return true;
```

```

    }
    s = s.substring(1) + s.charAt(0);
    }
    return false;
    }
    public static void main(String[] args)
    {
        String s1;
        String goal;

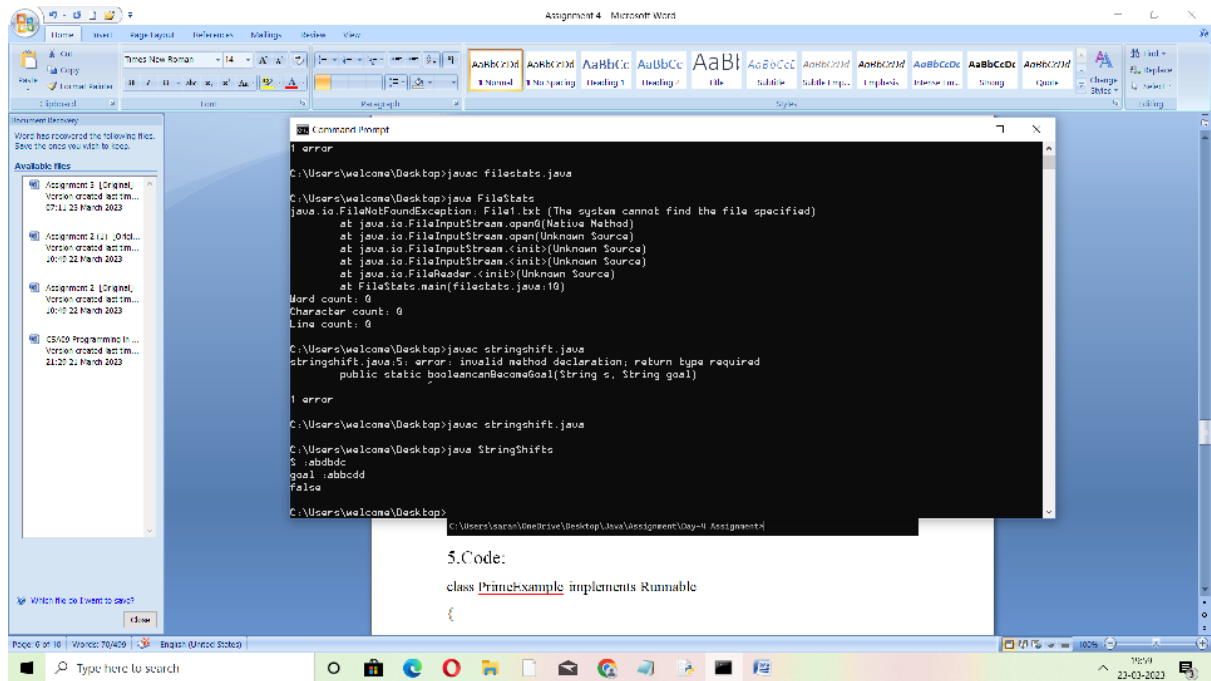
        Scanner s=new Scanner(System.in);
        System.out.print("S :");
        s1=s.nextLine();
        System.out.print("goal :");
        goal=s.nextLine();

        System.out.println(canBecomeGoal(s1, goal)); // false
    }
}

```

Output:





## 5.Code:

class PrimeExample implements Runnable

```
{
    @Override
    public void run()
    {
        int i, m = 20, flag = 1;
        for (i = 1; i <= m; i++)
        {
            if (i <= 3)
            {
                System.out.println(i + " is prime number");
                continue;
            }
            else
```

```

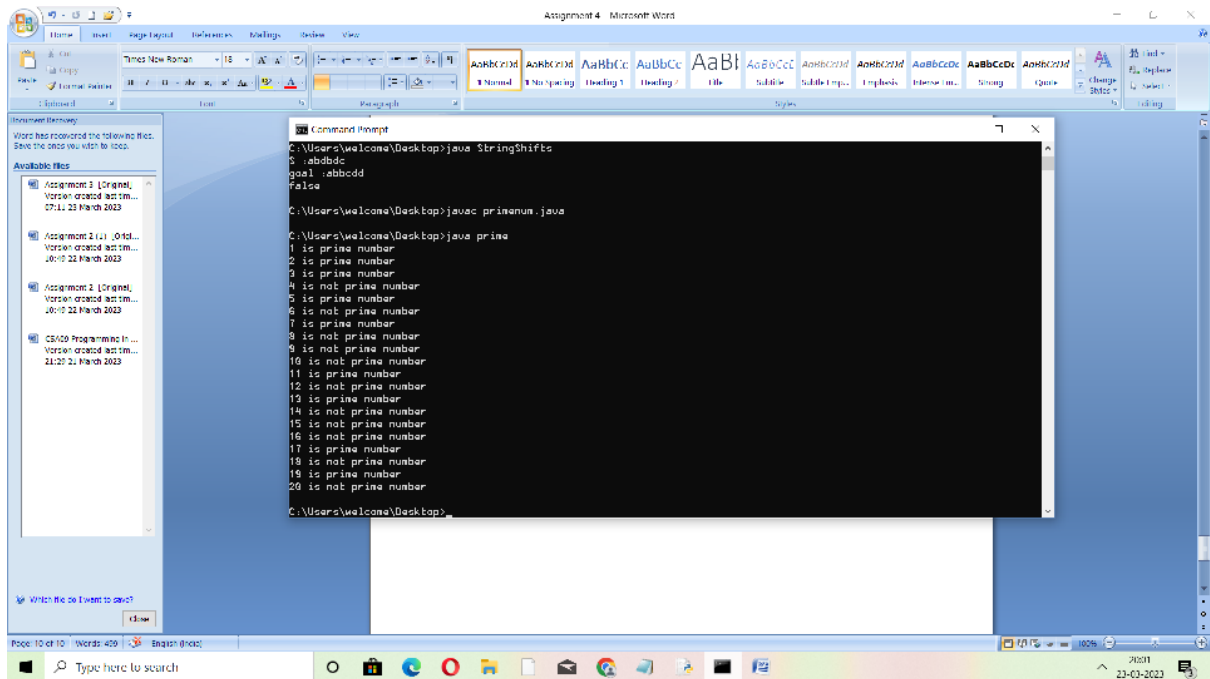
        {
            flag = 1;
            for (int j = 2; j < i; j++)
            {
                if (i % j == 0)
                {
                    flag = 0;
                    break;
                }
            }
            if (flag != 1)
            {
                System.out.println(i + " is not prime number");
            }
            else
            {
                System.out.println(i + " is prime number");
            }
        }
    }
}

class prime
{
    public static void main(String args[])
    {
        try

```

```
{
    PrimeExample p1 = new PrimeExample();
    Thread t1 = new Thread(p1);
    t1.start();
}
catch (Exception e)
{
    System.out.println(e.getMessage());
}
}
```

# Output:



The screenshot shows a Windows desktop environment. In the background, a Microsoft Word document titled "Assignment 4" is open. The ribbon shows the "Home" tab with various font and paragraph settings. In the foreground, a Command Prompt window is open, displaying the following text:

```
C:\Users\welcome\Desktop>java StringShifts
5 labbbdc
goal labbbdc
false
C:\Users\welcome\Desktop>javac primanum.java
C:\Users\welcome\Desktop>java prime
1 is prime number
2 is prime number
3 is prime number
4 is not prime number
5 is prime number
6 is not prime number
7 is prime number
8 is not prime number
9 is not prime number
10 is not prime number
11 is prime number
12 is not prime number
13 is prime number
14 is not prime number
15 is not prime number
16 is not prime number
17 is prime number
18 is not prime number
19 is prime number
20 is not prime number
C:\Users\welcome\Desktop>
```

The Command Prompt window is titled "Command Prompt" and has a standard Windows window border. The output shows the execution of two Java programs: "StringShifts" and "prime". The "StringShifts" program outputs "5 labbbdc", "goal labbbdc", and "false". The "prime" program outputs a list of numbers from 1 to 20, each followed by "is prime number" or "is not prime number".